

Abstract of the Disclosure

A heat-dissipating device of a semiconductor device is constituted by: first wiring substrate 1 on which 5 semiconductor elements 7 are mounted; second wiring substrate 2 that supports the back side of first wiring substrate 1, which is the side of this substrate 1 that is opposite the first wiring substrate active surface 4; and heat dissipator 9 that is thermally and mechanically 10 joined to the back surface of semiconductor elements 7, which is the surface of semiconductor elements 7 that is on the opposite side from the surface that confronts first substrate active surface 4. First wiring substrate 1 is electrically joined to second wiring substrate 2 by 15 conductors 6 that extend in the planar direction of first substrate active area 4 from first substrate active surface 4 to electrical junction surface 5 of second wiring substrate 2. Conductors 6 extend linearly in a planar direction that does not bend in the layer direction 20 and are therefore the minimum length. This minimization of length prevents deterioration of the harmonic propagation characteristic.